

FINAL STATEMENT OF REASONS
FOR
PROPOSED BUILDING STANDARDS
OF THE
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
REGARDING THE CALIFORNIA PLUMBING CODE
CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5

The Administrative Procedure Act requires that every agency shall maintain a file of each rulemaking that shall be deemed to be the record for that rulemaking proceeding. The rulemaking file shall include a final statement of reasons. The Final Statement of Reasons shall be available to the public upon request when rulemaking action is being undertaken. The following are the reasons for proposing this particular rulemaking action:

UPDATES TO THE INITIAL STATEMENT OF REASONS

(Government Code Section 11346.9(a)(1) requires an update of the information contained in the initial statement of reasons. If update identifies any data or any technical, theoretical or empirical study, report, or similar document on which the state agency is relying that was not identified in the initial statement of reasons, the state agency shall comply with Government Code Section 11347.1)

No data or any technical, theoretical or empirical study, report, or similar document on which the state agency is relying has been added to the rulemaking file that was not identified in the Initial Statement of Reasons.

The Department of Housing and Community Development (HCD) has made non-substantive, grammatical, or editorial language revisions to the sections listed below. At the direction of the California Building Standards Commission (CBSC), banners have been inserted to identify HCD's application of the amendments, and scoping language has been removed to provide consistency with other codes and clarity to the code user. The following sections have been revised: Sections 203.0, 204.0, 205.0, 206.0, 207.0, 214.0, 216.0, 222.0, 223.0, 225.0, 301.2, 301.5, 303.0, 304.0, 316.1.6, 316.2.4, 402.1, 406.5, 407.7, 411.6, 411.7, 413.0, Table 4-1, 508.2, 601.1, 601.2.2, 601.2.3, 601.4, 603.4.11, 604.1.1, 609.10, 705.1.7, 705.1.9, 705.2.5, 710.3.3.1, 903.3.1, 1101.5.1, Table A-2, and Installation Standard, IS 20-2005.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

(Pursuant to Government Code Section 11346.9(a)(2), if the determination as to whether the proposed action would impose a mandate, the agency shall state whether the mandate is reimbursable pursuant to Part 7 of Division 4. If the agency finds that the mandate is not reimbursable, it shall state the reasons for the finding(s))

The Department of Housing and Community Development has determined that the proposed regulatory action would not impose a mandate on local agencies or school districts.

OBJECTIONS OR RECOMMENDATIONS MADE REGARDING THE PROPOSED REGULATION(S)

(Government Code Section 11346.9(a)(3))

The following is HCD's summary of and response to comments specifically directed at the agency's proposed action or to the procedures followed by the agency in proposing or adopting the actions or reasons for making no change:

INTRODUCTION TO RESPONSE TO COMMENTS

During the adoption process for the 2006 California Plumbing Code, there have been four plumbing products (PEX, PEX-AL-PEX, CPVC for water distribution piping, and ABS/PVC DWV for drain, waste and venting above two stories) that have been the subject of extensive comments. In preparing the Final Statement of Reasons for building products, the Department of Housing and Community Development (HCD) would normally only address comments individually. However, in this case, for clarity HCD will provide a global response as well as an individual abbreviated response regarding these products.

When considering building products, the approving agencies must always balance the potential benefits against the potential risks. When approving a product new to the California Plumbing Code, such as cross-linked polyethylene tubing (PEX), HCD has an obligation to be reasonably assured that the product does not produce an unreasonable risk to health or safety. If a new product is excluded from the Code, there certainly is an economic consequence to the manufacturers and distributors of the product, as well as a potential loss of choice to the consumers. However, when balancing the interests, HCD resolves close questions in favor of protecting the health and welfare of the consumers and the installers.

On the other hand, when contemplating actions that will hamper the use of an already widely accepted, used and available product, HCD must weigh additional factors. This is particularly true where a material has undergone scrutiny for inclusion in the model code, but is restricted by the California version of that code. One such factor is the negative effects of causing a market disruption. Market disruption could have a very real economic impact on the manufacturers, retailers and installers of the product. Equally significant are the implications of eliminating the product for those consumers that have homes in which the product has been used. The mere appearance that California has determined that a product warrants elimination from the code when, in fact, it has made no such determination, could result in a loss of market value of these homes (must these families disclose the presence of this product upon sale?) and the fear for some homeowners that the product may result in a catastrophic failure. In this balancing of interests, HCD must be prudent before removing a product from usage unless there is reasonably compelling evidence that such an action is appropriate.

As noted earlier, four products were the subjects of significant comments with objections voiced against their use. It should also be noted that HCD's initial proposal regarding the use of these products does not expand the uses which are currently allowed under the 2006 Uniform Plumbing Code. In each case, HCD has evaluated these comments and concluded:

1. Although PEX and PEX-AL-PEX are included in the 2006 Uniform Plumbing Code, they are new products for approval in the California Plumbing Code. At this time, HCD chooses to be cautious and continue its review before including them in the California Plumbing Code. This action is not a prohibition of the use of PEX in California. Local building officials remain authorized to approve PEX pursuant to the State Housing Law on a case-by-case basis

through the alternate approval provision, or by ordinance upon an expressed finding that it is reasonably necessary because of local climatic, geological, or topographical conditions.

2. With respect to expanding the use of ABS/PVC for drain, waste and vent piping above two stories, HCD has determined that time limitations will not allow the completion of additional work required to fully address some of the comments received before approving unrestricted use of ABS/PVC for DWV. Again, it should be noted that HCD's initial proposal regarding the use of these products does not expand beyond the uses which are currently allowed under the 2006 Uniform Plumbing Code.
3. With respect to the removal of the local building official findings requirement for installation of CPVC for water distribution piping, all comments received during circulation of the Draft Environmental Impact Report (DEIR) and the Revised Draft Environmental Impact Report (RDEIR) for the expanded use of CPVC pipe for water distribution are responded to in the final CPVC EIR. For additional information, see the certified "Final Environmental Impact Report - Adoption of Regulations Permitting Statewide Residential Use of Chlorinated Polyvinyl Chloride (CPVC) Plastic Plumbing Pipe without First Making a Finding of Potential Premature Metallic Pipe Failure Due to Local Water or Soil Conditions."

COMMENTS 1 – 22 WERE RECEIVED DURING THE INITIAL 45-DAY COMMENT PERIOD.

COMMENTS 23 – 24 WERE RECEIVED DURING THE SECOND 45-DAY COMMENT PERIOD.

(The text with proposed changes clearly indicated was made available to the public from September 8, 2006 until October 23, 2006, and from November 24, 2006 until January 8, 2007.)

1. COMMENTER: David Alstadt
Building Inspection Manager (P&M)
City of San Jose
DAVID.ALSTADT@SANJOSECA.GOV

COMMENT: EM-5, Sections 301.2 and 301.4.5: As currently written, the Authority Having Jurisdiction must approve the method or material and conflicts with the requirements in Sections 105.0, 106.0, 107.0, 107.1, 107.2 and 108.1 of the 2006 Uniform Mechanical Code as well as subsequent sections of the UPC such as Sections 102.2.4, 508.1 and 1014.1.2. The intent of these sections is that the Authority Having Jurisdiction has the authority to approve or not to approve the method or material. A common misconception is implied that jurisdictions must approve the material or method instead of having the Authority to disapprove. Both the UPC and UMC had proposed revisions to Alternate Materials and Methods of Construction Equivalency; however, the proposed language was not correlated between the two codes. As currently stated, "shall approve" provides misconceptions that lead to non-uniform enforcement.

The complete 2-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD%203_06-Adler-301.2.pdf

RESPONSE: HCD appreciates and acknowledges the comment received pertaining to alternate design and approval. However, the comment is not specific to a proposed amendment, or repeal of regulations that are being proposed by HCD. In this rulemaking, HCD proposed to add a reference to Section 301.2 which directs the code user to the proper section of the California Plumbing Code which must be used by local enforcing agencies to lawfully consider an alternate method or design. In addition, the enabling statutory language in the Health and Safety Code, and implementing language proposed in California Chapter 1 of the California Plumbing Code as well as proposed amendment language in the California Mechanical Code does allow for local

discretionary approval of alternate materials provided the material is not already covered in the code.

2. COMMENTER: Sarah Aguilar
Southland Industries
775 Commercial St.
San Jose, CA 95112

Martin D. Cooper
City of Foster City, Building Inspector
610 Foster City
Foster City, CA 94404

COMMENT: F-1 and F-2, Section 301.2: It is inconsistent with the statutory language in Health & Safety Code section 17951, subsection (e), that controls alternate material approvals for buildings under HCD jurisdiction. The new UPC language for Section 301.2 (alternate materials) is ambiguous as to whether alternate material approval is discretionary. It is inconsistent with the alternate material language found in the Uniform Mechanical Code Section 105.0 and NEC 90.4.

The complete 1-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD%203_06-Aguilar-Cooper-310.2.pdf

RESPONSE: HCD appreciates the comment received pertaining to alternate design and approval. However, the comment is not specific to a proposed amendment, or repeal of regulations that are being proposed by HCD. In this rulemaking, HCD proposed to add a reference to Section 301.2 which directs the code user to the proper section of the California Plumbing Code which must be used by local enforcing agencies to lawfully consider an alternate method or design. In addition, the enabling statutory language in the Health and Safety Code, and implementing language proposed in California Chapter 1 of the California Plumbing Code as well as proposed amendment language in the California Mechanical Code does allow for local discretionary approval of alternate materials provided the material is not already covered in the code.

3. COMMENTER: Michael Cudahy
Plastic Pipe and Fittings Association (PPFA)
800 Roosevelt Road, Bldg C, Ste 312
Glen Ellyn, IL 60137

COMMENT: EM-8, Sections 701.1.2.2, 903.1.2.2, 1101.3.1, 1101.3.3 & 1102.1.2: Plastic Pipe and Fittings Association (PPFA) supports the removal of the two story limitation for ABS and PVC installations. While special interests may attempt to imply plastic pipe as an unusual fire hazard to building occupants, this is simply not the case. Charts reflect the historical fire trends during the dramatic growth of plastic pipe. The Dr. Zicherman paper, Plastic Pipe and Fire Safety, specifically reviews plastic pipe behavior in fires and concludes there is no increase in fire risk with plastic pipe compared with other materials. The paper can also be viewed at the following link: http://www.fpemag.com/archives/article.asp?issue_id=20&i=125

1. PVC and Fire Incidence Charts
2. Plastic Pipe and Fire Safety, Joseph B. Zicherman, 2000

The complete 2-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD%203_06-Cudahy-701.1.2.2.pdf

RESPONSE: Due to time constraints and insufficient information, HCD is unable to complete an adequate review of these products before the CPC is presented to the CBSC for decision. As a result, HCD is proposing to bring forward the previous amendment which would amend the UPC to limit the use of ABS/PVC DWV to two stories of areas of residential accommodation.

4. COMMENTER: Nate Vasquez
Chapter Secretary
Central California Chapter IAPMO
NATE@PTTC393.ORG

COMMENT: EM-7, Section 301.2: It is inconsistent with the statutory language in Health & Safety Code section 17951, subsection (e), that controls alternate material approvals for buildings under HCD jurisdiction. The new UPC language for Section 301.2 (alternate materials) is ambiguous as to whether alternate material approval is discretionary. It is inconsistent with the alternate material language found in the Uniform Mechanical Code Section 105.0 and NEC 90.4.

The complete 3-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD%203_06-Vasquez-301.2.pdf

RESPONSE: HCD acknowledges the comment received pertaining to alternate design and approval. However, the comment is not specific to a proposed amendment, or repeal of regulations that are being proposed by HCD. In this rulemaking, HCD proposed to add a reference to Section 301.2 which directs the code user to the proper section of the California Plumbing Code which must be used by local enforcing agencies to lawfully consider an alternate method or design. In addition, the enabling statutory language in Health & Safety Code section 17951, subsection (e), and implementing language proposed in California Chapter 1 of the California Plumbing Code as well as proposed amendment language in the California Mechanical Code does allow for local discretionary approval of alternate materials provided the material is not already covered in the code.

5. COMMENTER: Dennis J. Herrera
Kate Stacy
City and County of San Francisco
City Hall Room 234
1 Dr. Carlton B. Goodlett Place.
San Francisco, CA 94102

COMMENT: F-3, Sections 316.1.6, 604.1.1, 604.1.2, 604.11, 604.11.2, 604.13, 604.13.1, 064.13.2, 701.1.2.2, 903.1.2.2, 1101.3.1, 1101.3.3, 1102.1.2 and Table 6-4: The commenters are concerned that the use of PEX, PEX-AL-PEX, CPVC and ABS and PVC drain waste and vent piping materials have not received adequate examination of the potential public health and safety impacts associated with the use of these products. The commenters are also concerned that the approval of these products without adequate environmental review violates the California Environmental Quality Act (CEQA).

The complete 7-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD%203_06-Stacy-PEX.pdf

RESPONSE: PEX and PEX-AL-PEX: Building standards for cross-linked polyethylene tubing (PEX) first appeared in the 2000 Uniform Plumbing Code, and building standards for cross-linked polyethylene-aluminum-cross-linked polyethylene tubing (PEX-AL-PEX) first appeared in the 2003 Uniform Plumbing Code. PEX and PEX-AL-PEX are now utilized in 49 other states, and over 300 localities in California. HCD gives great weight to the methods and testing which led to inclusion of these products in the Uniform Plumbing Code, and for this reason, included the products in the proposed 2007 California Plumbing Code. However, during the public comment period for adoption of these products into the 2007 California Plumbing Code, several issues were raised that cannot be fully addressed within the timeframe for adoption in this code adoption cycle. Therefore, HCD proposes to remove proposed building standards for PEX and PEX-AL-PEX from the proposed 2007 California Plumbing Code.

Withdrawal of PEX and PEX-AL-PEX from the proposed California Plumbing Code does not result in a prohibition of the use of these products. Local building officials remain authorized to approve PEX and PEX-AL-PEX pursuant to State Housing Law on a case-by-case basis, through the alternate approval provision, or by ordinance, upon an expressed finding that it is reasonably necessary because of local climatic, geological, or topographical conditions.

ABS/PVC DWV applications above two-stories: Due to time constraints and insufficient information, HCD is unable to complete an adequate review of these products before the CPC is presented to the CBSC for decision. As a result, HCD is proposing to bring forward the previous amendment which would amend the UPC to limit the use of ABS/PVC DWV to two stories of areas of residential accommodation.

Removal of finding requirement for CPVC: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

6. COMMENTER: Rocky Delgado
City of Los Angeles
200 North Main Street
Los Angeles, CA. 90012-4131

COMMENT: F-4, Sections 604.1, 604.1.1, 604.1.2, 604.11, 604.11.1, 604.11.2, 604.13, 604.13.1, 604.13.2, 701.1.2.2, 903.1.2.2, 1101.3.1, 1101.3.3, 1102.1.2 and Table 6-4: The commenter is concerned that the use of PEX, PEX-AL-PEX, CPVC and ABS and PVC drain waste and vent piping materials have not received adequate examination of the potential public health and safety impacts associated with the use of these products. The commenter is also concerned that the approval of these products without adequate environmental review violates the California Environmental Quality Act (CEQA) and is bad public policy.

The complete 7-page comment is available at the following internet address:
http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD%203_06-Delgadillo%20-%20PEX.pdf

RESPONSE: PEX and PEX-AL-PEX: Building standards for cross-linked polyethylene tubing (PEX) first appeared in the 2000 Uniform Plumbing Code, and building standards for cross-linked polyethylene-aluminum-cross-linked polyethylene tubing (PEX-AL-PEX) first appeared in the 2003 Uniform Plumbing Code. PEX and PEX-AL-PEX are now utilized in 49 other states, and over 300 localities in California. HCD gives great weight to the methods and testing which led to

inclusion of these products in the Uniform Plumbing Code, and for this reason, included the products in the proposed 2007 California Plumbing Code. However, during the public comment period for adoption of these products into the 2007 California Plumbing Code, several issues were raised that cannot be fully addressed within the timeframe for adoption in this code adoption cycle. Therefore, HCD proposes to remove proposed building standards for PEX and PEX-AL-PEX from the proposed 2007 California Plumbing Code.

Withdrawal of PEX and PEX-AL-PEX from the proposed California Plumbing Code does not result in a prohibition of the use of these products. Local building officials remain authorized to approve PEX and PEX-AL-PEX pursuant to State Housing Law on a case-by-case basis, through the alternate approval provision, or by ordinance, upon an expressed finding that it is reasonably necessary because of local climatic, geological, or topographical conditions.

ABS/PVC DWV applications above two-stories: Due to time constraints and insufficient information, HCD is unable to complete an adequate review of these products before the CPC is presented to the CBSC for decision. As a result, HCD is proposing to bring forward the previous amendment which would amend the UPC to limit the use of ABS/PVC DWV to two stories of areas of residential accommodation.

Removal of finding requirement for CPVC: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

7. COMMENTER: Michael Cudahy
Plastic Pipe and Fittings Association (PPFA)
800 Roosevelt Road, Bldg C, Ste 312
Glen Ellyn, IL 60137

COMMENT: EM-6(B), Section 604: Plastic Pipe and Fittings Association (PPFA) supports the statewide approval of PEX and CPVC and the full adoption of the model plumbing code. PPFA believes that full adoption is the proper course of action so a level playing field exists for all materials and participants in the building industry. Any unwarranted, politically motivated, or special interest restriction in the California State Code negatively impacts the public, interstate commerce and builders by limiting choices of materials and likely increases project cost. Plastic piping materials are safe, proven and energy and water saving materials that simply out perform alternatives at lower installed costs and there is no reason to limit their application. The full statewide adoption of hot and cold water distribution plastic piping systems would provide environmental benefits to California such as less copper discharge, energy and water savings over legacy systems such as copper tube, all at a lower installed cost for consumers. California agencies and groups concerned with copper accumulating in bodies of water and harming the ecosystem, such as Bay Area Clean Water Agencies and Bay Area Pollution Prevention Group, have suggested using non-copper pipe where permitted. The Palo Alto Regional Water Quality Control Plant has estimated that approximately 71% of the copper discharged from the RWQCP into the San Francisco Bay comes from corrosion of copper pipes and cooling equipment in homes and businesses. As early as 1997, they indicated a possible corrective action would be to ban the use of copper pipe in new buildings. Numerous energy and water savings studies of plastic and copper piping such as "Evaluation of Residential Hot Water Distribution Systems by Numeric Simulation" produced for the California Energy Commission by Oak Ridge Labs, indicated adoption would be beneficial for California in terms of energy and water savings.

The complete 4-page comment and attachments are available at the following internet addresses:
http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD-3_06-PEX-Cudahy-604.pdf

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Ref.%20Mat.%20-%20PPFA%20attachment%201.pdf

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Ref.%20Mat.%20-%20PPFA%20attachment%202.pdf

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Ref.%20Mat.%20-%20PPFA%20attachment%203.pdf

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Ref.%20Mat.%20-%20PPFA%20attachment%204.pdf

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Ref.%20Mat.%20-%20PPFA%20attachment%205.pdf

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Ref.%20Mat.%20-%20PPFA%20attachment%206.pdf

RESPONSE: PEX and PEX-AL-PEX: Building standards for cross-linked polyethylene tubing (PEX) first appeared in the 2000 Uniform Plumbing Code, and building standards for cross-linked polyethylene-aluminum-cross-linked polyethylene tubing (PEX-AL-PEX) first appeared in the 2003 Uniform Plumbing Code. PEX and PEX-AL-PEX are now utilized in 49 other states, and over 300 localities in California. HCD gives great weight to the methods and testing which led to inclusion of these products in the Uniform Plumbing Code, and for this reason, included the products in the proposed 2007 California Plumbing Code. However, during the public comment period for adoption of these products into the 2007 California Plumbing Code, several issues were raised that cannot be fully addressed within the timeframe for adoption in this code adoption cycle. Therefore, HCD proposes to remove proposed building standards for PEX and PEX-AL-PEX from the proposed 2007 California Plumbing Code.

Withdrawal of PEX and PEX-AL-PEX from the proposed California Plumbing Code does not result in a prohibition of the use of these products. Local building officials remain authorized to approve PEX and PEX-AL-PEX pursuant to State Housing Law on a case-by-case basis, through the alternate approval provision, or by ordinance, upon an expressed finding that it is reasonably necessary because of local climatic, geological, or topographical conditions.

Removal of finding requirement for CPVC: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

8. COMMENTER: Thomas Enslow
Adams Broadwell Joseph and Cardozo
1225 8th Street, Suite 550
Sacramento, CA 95814-4810

COMMENT: L-1, Sections 701.1.2.2, 903.1.2.2, 1101.3.1, 1101.3.3 and 1102.1.2: The commenter expresses concern that the use of ABS and PVC drain waste and vent piping materials in residential occupancies over two stories in height has not received adequate examination and may result in significant health, safety and environmental impacts. The commenter also is concerned that the nine-point criteria listed in Health and Safety Code Section 18930 is violated because the use of ABS and PVC drain waste and vent piping materials in residential occupancies over two stories in height has not been sufficiently evaluated and would violate the California Environmental Quality Act (CEQA).

The complete 37-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD-3_06-PVC-ABS-Enslow.pdf

RESPONSE: Due to time constraints and insufficient information, HCD is unable to complete an adequate review of these products before the CPC is presented to the CBSC for decision. As a result, HCD is proposing to bring forward the previous amendment which would amend the UPC to limit the use of ABS/PVC DWV to two stories of areas of residential accommodation.

9. COMMENTER: Petra Pless
440 Nova Albion Way, Suite 2
San Rafael, CA. 94903

COMMENT: L-2, Sections 701.1.2.2, 903.1.2.2, 1101.3.1, 1101.3.3 and 1102.1.2: Under the current CPC regulations, HCD restricts the use of PVC and ABS DWV pipe to residential buildings no more than two stories in height. The removal of the two-story restriction is likely to increase the amount of PVC and ABS pipe installed in new residential construction and their use for re-pipings (i.e., replacing DWV piping in existing residences) as a direct result of builder choice over commonly used cast iron or copper pipe. The cleaners and cements used to join PVC and ABS pipes contain solvents that are volatile organic compounds ("VOCs") which evaporate during application. VOCs, together with nitrogen oxides ("NOx"), are the main reactants in the atmospheric photochemistry that produces ozone in the troposphere, also referred to as photochemical smog. As discussed in the comments below, removal of the restrictions on the use of PVC and ABS pipe may result in significant direct and cumulative air quality impacts, both statewide and within specific air basins. Such impacts should be quantified and evaluated in more detail in an Environmental Impact Report ("EIR") prior to the consideration of this Project for approval.

The complete 31-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD-3_06-PVC-ABS-Pless.pdf

RESPONSE: Due to time constraints and insufficient information, HCD is unable to complete an adequate review of these products before the CPC is presented to the CBSC for decision. As a result, HCD is proposing to bring forward the previous amendment which would amend the UPC to limit the use of ABS/PVC DWV to two stories of areas of residential accommodation.

10. COMMENTER: Thomas Reid
TRA Environmental Services, Inc.
545 Middlefield Rd
Menlo Park, CA 94025-3472

COMMENT: L-3, Sections not specified: Expanding ABS and PVC DWV use into structures over two stories will have potentially significant environmental effects on several aspects of the environment. It is insufficient to dismiss these effects as minor additions to the currently accepted effects from ABS and PVC DWV in low rise construction: there are technical reasons why the effects will be more pronounced and there are reasons the ABS and PVC DWV project along with other HCD actions will be cumulatively significant. HCD should undertake an EIR to investigate these issues and develop possible mitigation for the effects.

The complete 7-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD-3_06-PVC-ABS-Reid.pdf

RESPONSE: Due to time constraints and insufficient information, HCD is unable to complete an adequate review of these products before the CPC is presented to the CBSC for decision. As a result, HCD is proposing to bring forward the previous amendment which would amend the UPC to limit the use of ABS/PVC DWV to two stories of areas of residential accommodation.

11. COMMENTER: Coalition for Safe Building Products
California Pipe Trades Council
California Professional Firefighters
Consumer Federation of California
Planning and Conservation League
Center for Environmental Health
Sierra Club of California
Communities for a Better Environment

c/o Thomas Enslow
Adams Broadwell Joseph & Cardozo
1225 8th Street, Suite 550
Sacramento, CA 95814-4810

COMMENT: L-4, Sections not specified: This item consists of a face sheet and attached letter dated September 14, 2006 from Thomas Enslow to HCD Staff Counsel Robin Gilb stating that the Coalition of Safe Building Products is submitting comments prepared by Adams Broadwell Joseph & Cardozo (Commenter 12), Petra Pless (Commenter 13, Exhibit A & D), Thomas S. Reid (Commenter 13, Exhibit B & E), Jim Bellows (Commenter 13, Exhibit C & F) and J. Phyllis Fox (Commenter 13, Exhibit G) related to HCD's Draft Environmental Impact Report, State Clearinghouse No. 2006012044.

The complete 3-page face sheet and letter is available at the following internet address:
http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Pub.%20Comment%20to%20HCD-3_06-ABJC-Cover%20Letter-Enslow.pdf

RESPONSE: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

12. COMMENTER: Thomas Enslow
Adams Broadwell Joseph & Cardozo
1225 8th Street, Suite 550
Sacramento, CA 95814-4810

COMMENT: L-5, Sections not specified: The comments report, studies and evidence submitted to HCD demonstrate that approval of the proposed amendment allowing statewide use of CPVC may result in numerous significant impacts on public health and the environment. Such impacts include contamination of drinking water, worker exposure to toxic solvents, increased emissions, manufacturing impacts, solid waste impacts and increased fire hazards. The evidence submitted further demonstrates that the CPVC DEIR fails to adequately evaluate and mitigate these impacts.

The complete 15 page comment is available at the following internet address:

RESPONSE: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

13. COMMENTER: Coalition for Safe Building Products
California Pipe Trades Council
California Professional Firefighters
Consumer Federation of California
Planning and Conservation League
Center for Environmental Health
Sierra Club of California
Communities for a Better Environment

COMMENT: L-6, Sections 604.1, 604.1.1 and 604.1.2: The commenter states the DEIR is profoundly inadequate and fails to meet the minimum requirements of CEQA. The DEIR does not provide substantial evidence or an analytic basis to support its findings or project approval. Further, the DEIR ignores a vast body of evidence demonstrating that the expanded statewide approval of CPVC may have numerous significant impacts on public health and the environment. As a result, it fails in significant aspects to perform its function as an informational document that is meant "to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment" and "to list ways in which the significant effects of such a project might be minimized."

The Coalition for Safe Building Materials respectfully requests that HCD withdraw the DEIR and revise it to fully and completely address the issues and evidence that we have presented. The revised DEIR must then be recirculated for public review.

The complete 105-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%201%20-%20Pub.%20Comment%20to%20HCD-3_06-Coalition%20for%20Safe%20Building%20Mat..pdf

RESPONSE: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

13. Exhibit A. COMMENTER: Petra Pless
440 Nova Albion Way, Suite 2
San Rafael, CA 94903

COMMENT: L-6(A), Section 604.1: The Draft EIR is deficient and many conclusions reached in the Draft EIR with respect to the significance of the Project's potential impacts on air quality are flawed and devoid of any real analysis. Dr. J. Phyllis Fox had submitted extensive comments on the 2005 AMND ("Fox 04/22/20054, attached as Exhibit 1). Because some of these comments

were disregarded or not adequately addressed, portions of Dr. Fox's comments are incorporated into this comment letter where applicable.

The complete 105-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Exhibit%20A%20-%20Pless%20Comments-Vol%201.pdf

RESPONSE: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

13. Exhibit B. COMMENTER: Thomas Reid
TRA Environmental Services, Inc.
545 Middlefield Rd
Menlo Park, CA 94025-3472

COMMENT: L-6(B), Section 604.1: The EIR project description is inadequate to fully characterize the potential for environmental impact. Reliance on NSF International is insufficient to meet CEQA purpose of full disclosure and public review. The project would result in significant public health impacts from drinking contaminated water. Proposed expansion of use relies on inadequate flushing protocol. Uncertainty in composition and leaching has potential environmental effects on wastewater discharge. CPVC will frustrate efforts to increase recycling of construction materials and impact solid waste management in California. CPVC has broad global effects, including potential impacts on California. Mechanical failure is a risk. Given the history of plastic pipe in California, HCD would be prudent to heed these comments and take the time to get a full disclosure on the material subject to the expanded use approval and formulate effective mitigation to minimize public health and environmental impacts.

The complete 17-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Exhibit%20B%20-%20Reid%20Comments-Vol%201.pdf

RESPONSE: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

13. Exhibit C. COMMENTER: Jim Bellows
5000 Manila Ave.
Oakland, CA 94000

COMMENT: L-6(C), Section 604.1: The draft EIR fails to acknowledge existing evidence that CPVC pipe installation exposes workers to dermal and inhalation health hazards during typical use. The draft EIR bases its worker safety findings on the unrealistic assumption that workers will consistently follow safety procedures. The protective gloves specified by safety recommendations and regulations would not be effective in controlling dermal exposures. The draft EIR inappropriately extrapolates conclusions from the 2000 Mitigated Negative Declaration, failing to consider the impact of increased exposures likely to result under the recommended

alternative. The draft EIR inappropriately indicates that use of low-VOC primers and cements will reduce exposures, without any supporting evidence. Additional mitigation measures could further reduce the frequency and severity of over exposures.

The complete 10-page comment is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Exhibit%20C%20-%20Bellows%20Comments-Vol%201.pdf

RESPONSE: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

13. Exhibit D. COMMENTER: Petra Pless
440 Nova Albion Way, Suite 2
San Rafael, CA 94903

COMMENT: L-6(D), Curriculum Vitae, not a comment.

The complete 6-page Curriculum Vitae is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Exhibit%20D%20-%20Pless%20CV-Vol%201.pdf

RESPONSE: None required.

13. Exhibit E. COMMENTER: Thomas Reid
TRA Environmental Services, Inc.
545 Middlefield Rd
Menlo Park, CA 94025-3472

COMMENT: L-6(E), Resume, not a comment.

The complete 2-page resume is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Exhibit%20E%20-%20Reid%20Resume-Vol%201.pdf

RESPONSE: None required.

13. Exhibit F. COMMENTER: Jim Bellows
5000 Manila Ave.
Oakland, CA 94000

COMMENT: L-6(F), Curriculum Vitae, not a comment.

The complete 4-page Curriculum Vitae is available at the following internet address:

http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Exhibit%20F%20-%20Bellows%20CV-Vol%201.pdf

RESPONSE: None required.

13. Exhibit G. COMMENTER: J. Phyllis Fox
Environmental Management
2530 Etna Street
Berkeley, CA 94704

COMMENT: L-6(G), Curriculum Vitae, not a comment.

The complete 25-page Curriculum Vitae is available at the following internet address:
http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Exhibit%20G%20-%20Fox%20CV-Vol%201.pdf

RESPONSE: None required.

14. COMMENTER: Coalition for Safe Building Products
California Pipe Trades Council
California Professional Firefighters
Consumer Federation of California
Planning and Conservation League
Center for Environmental Health
Sierra Club of California
Communities for a Better Environment

COMMENT: L-7, Volume II appendices to the comments of Adams Broadwell Joseph & Cardozo, not a comment.

RESPONSE: None required. The complete 714-page appendices are available at the following internet address:
[http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%202%20\(App%201-32\).pdf](http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%202%20(App%201-32).pdf)

15. COMMENTER: Coalition for Safe Building Products
California Pipe Trades Council
California Professional Firefighters
Consumer Federation of California
Planning and Conservation League
Center for Environmental Health
Sierra Club of California
Communities for a Better Environment

COMMENT: L-8, Volume III appendices to the comments of Adams Broadwell Joseph & Cardozo, not a comment.

RESPONSE: None required. The complete 607-page appendices are available at the following internet address:
[http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%203%20\(App%2033-65\).pdf](http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%203%20(App%2033-65).pdf)

16. COMMENTER: Coalition for Safe Building Products
California Pipe Trades Council
California Professional Firefighters
Consumer Federation of California
Planning and Conservation League
Center for Environmental Health
Sierra Club of California
Communities for a Better Environment

COMMENT: L-9, Volume IV appendices to the comments of Adams Broadwell Joseph & Cardozo, not a comment.

RESPONSE: None required. The complete 368-page appendices are available at the following internet address:

[http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%204%20\(App%2066-86\).pdf](http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%204%20(App%2066-86).pdf)

17. COMMENTER: Coalition for Safe Building Products
California Pipe Trades Council
California Professional Firefighters
Consumer Federation of California
Planning and Conservation League
Center for Environmental Health
Sierra Club of California
Communities for a Better Environment

COMMENT: L-10, Volume V appendices to the comments of Adams Broadwell Joseph & Cardozo, not a comment.

RESPONSE: None required. The complete 413-page appendices are available at the following internet address:

[http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%205%20\(App%2087-88\).pdf](http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%205%20(App%2087-88).pdf)

18. COMMENTER: Coalition for Safe Building Products
California Pipe Trades Council
California Professional Firefighters
Consumer Federation of California
Planning and Conservation League
Center for Environmental Health
Sierra Club of California
Communities for a Better Environment

COMMENT: L-11, Volume VI appendices to the comments of Adams Broadwell Joseph & Cardozo (Tom Reid comments on 1998 EIR and attachments), not a comment.

RESPONSE: None required. The complete 425-page appendices are available at the following internet address:

[http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%206%20\(App%20100\).pdf](http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%206%20(App%20100).pdf)

19. COMMENTER: Coalition for Safe Building Products
California Pipe Trades Council
California Professional Firefighters
Consumer Federation of California
Planning and Conservation League
Center for Environmental Health
Sierra Club of California
Communities for a Better Environment

COMMENT: L-12, Volume VII appendices to the comments of Adams Broadwell Joseph & Cardozo (19823 SRI International Environmental Review of Proposed Expanded uses of plastic plumbing pipe), not a comment.

RESPONSE: None required. The complete 576-page appendices are available at the following internet address:

[http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%207%20\(App%20101\).pdf](http://www.bsc.ca.gov/prpsd_chngs/documents/2006/Volume%207%20(App%20101).pdf)

20. COMMENTER: Richard Skaff
Executive Director
Designing Accessible Communities
303 Ashton Lane
Mill Valley, CA 94941

COMMENT: EM-1, Miscellaneous sections in Chapter 1: The commenter expresses support for various sections of California Chapter 1 of the California Plumbing Code in the rulemaking package submitted by the Division of the State Architect.

RESPONSE: HCD acknowledges the comment received pertaining to the rulemaking proposed by the Division of the State Architect. The comment is not specific to a proposed amendment, or repeal of regulations that are being proposed by HCD, and no new code changes have been proposed to HCD's rulemaking package as a result of this comment.

21. COMMENTER: Susan Chandler (Barnhill)
Barnhill@aol.com

COMMENT: EM-2, Miscellaneous sections in Chapter 1, this comment is the same as EM-1: The commenter expresses support for various sections of California Chapter 1 of the California Plumbing Code in the rulemaking package submitted by the Division of the State Architect. These comments are similar comments as submitted by commenter Richard Skaff.

RESPONSE: See response to comment EM-1.

22. COMMENTER: Connie Arnold
Disability Policy Consultant
3328 Mayten Way
Elk Grove, CA 95758

COMMENT: EM-3 & 4, Miscellaneous sections in Chapter 1, this comment is the same as EM-1: The commenter expresses support for various sections of California Chapter 1 of the California Plumbing Code in the rulemaking package submitted by the Division of the State Architect. These comments are similar comments as submitted by commenter Richard Skaff.

RESPONSE: See response to comment EM-1.

23. COMMENTER: Coalition for Safe Building Products
California Pipe Trades Council
California Professional Firefighters
Consumer Federation of California
Planning and Conservation League
Center for Environmental Health
Sierra Club of California
Communities for a Better Environment

c/o Thomas Enslow
Adams Broadwell Joseph & Cardozo
1225 8th Street, Suite 550
Sacramento, CA. 95814-4810

COMMENT: L-13, Sections: 604.1, 604.1.1, and 604.1.2. The comments, expert reports, studies and other evidence submitted to HCD and the commission demonstrate that approval of

the amendment to allow statewide use of CPVC may result in numerous significant impacts on public health including contamination of drinking water, worker exposure to toxic solvents, increased air emissions, manufacturing impacts, solid waste impacts and increased fire hazards.

The complete 13-page comment is available at the following internet address:

<http://www.bsc.ca.gov/>

RESPONSE: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

24. COMMENTER: Coalition for Safe Building Products
California Pipe Trades Council
California Professional Firefighters
Consumer Federation of California
Planning and Conservation League
Center for Environmental Health
Sierra Club of California
Communities for a Better Environment

c/o Thomas Enslow
Adams Broadwell Joseph & Cardozo
1225 8th Street, Suite 550
Sacramento, CA. 95814-4810

COMMENT: L-14, Sections not specified: The supplemental comments are identical to the comments received for HCD's recirculated draft EIR, State Clearinghouse No. 2006012044.

The complete comment is available at the following internet address:

<http://www.bsc.ca.gov/>

RESPONSE: In compliance with CEQA, HCD has completed a draft Environmental Impact Report (EIR) regarding the use of CPVC piping without first making a finding of premature metallic pipe failure due to local water or soil conditions. HCD is now in the process of responding to public comments to that document. In reliance on the draft EIR's underlying data, HCD has proposed amendments requiring the use of one-step cement for CPVC. For additional information, see the CPVC draft EIR prepared by HCD.

DETERMINATION OF ALTERNATIVES CONSIDERED AND EFFECT ON PRIVATE PERSONS

(Government Code Section 11346.9(a)(4))

The Department of Housing and Community Development has determined that no alternative considered would be more effective in carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected private persons than the adopted regulation.

The California Plumbing Code is Part 5 of Title 24 of the California Code of Regulations, known as the California Building Standards Code, which is based upon model codes developed by

private not-for-profit code organizations that maintain a code development and update mechanism, publish and sell their codes, and provide support services.

Health and Safety Code Section 17922 directs the Department of Housing and Community Development (HCD) to adopt the most recent edition of the Uniform Plumbing Code (UPC) published by the International Association of Plumbing and Mechanical Officials (IAPMO) into Part 5 of Title 24 of the California Code of Regulations.

The membership of this association is composed of representatives of all facets of the building industry. They include building contractors, inspectors, building officials, engineers, architects, designers, manufacturers, wholesalers and consumers.

CBSC Direction – Adopt the 2006 UPC

In 2005, the CBSC directed HCD to propose amendments, if necessary, which would be placed into the 2006 UPC for adoption as the 2007 CPC in Title 24, Part 5 of the CCR.

It is necessary for HCD to review the 2006 UPC prior to proposing amendments in order to incorporate the most recent changes to state and federal laws, provisions, and regulations as amendments to address unique California conditions.

HCD does not believe that the proposed amendments to the 2006 UPC have a significant adverse impact on California business and individuals, including the ability of California businesses to compete with business in other states; affect the creation of or elimination of jobs within California; affect the creation of or elimination of existing business within the state of California; or affect the expansion of businesses currently doing business within the State of California.

Due to the series of reviews by representatives of business and the community that these proposed model codes are subjected to, prior to and after HCD's review, and since there were no alternatives proposed to HCD as a result of the Public Comment Period, HCD has no reason to believe that there is an alternative to these regulations that would be more effective in carrying out the purpose for which the regulations are proposed or would be as effective and less burdensome to affected private persons than the adopted regulations.

REJECTED PROPOSED ALTERNATIVE THAT WOULD LESSEN THE ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES

(Government Code Section 11346.9(a)(5))

No proposed alternatives were received by the Department of Housing and Community Development that would lessen the adverse economic impact on small businesses.